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DPS-4135 ✓
Copy 1 of 7

11 September 1958

MEMORANDUM FOR : Special Assistant to the Director
for Planning and Development

THROUGH : Director of Development and Procurement, DPS

SUBJECT : Field Trip of Dr. R. Scott and []
[] to Detachments

REFERENCE : CHAL-0127 dtd 7 Aug. 1958, Subject, same as
above

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1. Dr. R. Scott and the undersigned were at Detachment B from 12 August to 15 August incl. and at Detachment C from 21 August to 29 August incl. During these periods the referenced memorandum was used as a guide.

2. The following topics will be covered in greater detail by Dr. Scott in a separate report:

- (A) Quality Control, including processing.
- (B) Tracker, Hand Control and Drift Sight Problems.
- (C) Evaluation of configuration optics.

3. The undersigned's observations and opinions on the above subjects are as follows:

A. QUALITY CONTROL

1. Detach B - Much detail is being lost during the processing of the mission take. These losses are due to relatively high and inconsistent solution temperatures within the processing tanks; inconsistent processing speeds; and a certain lack of technical know-how and appreciation of the importance of good processing by not only certain of the machine operators but also by the responsible officer. According to [] personnel, excessive and varying high solution temperatures are due to faulty Temprite units and circulation pumps; relatively high intake water temperatures; high room temperatures due to nonducted dryers which are located adjacent to the A-9 processors. It is the undersigned's opinion all of the aforementioned deficiencies could and can be remedied with a minimum expenditure of cost and effort. For example, assigning a competent maintenance man to

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25X1 the [] processing crew (no maintenance man in crew at present
25X1 time); reindoctrinating [] personnel; isolating and ducting
off heat from the film dryers; if necessary, connecting Temprite
units in series to accelerate drop in water and solution tempera-
tures and to hold temperatures within acceptable limits; using
spare A-9 processor as receptacle to mix and cool solutions and
then siphoning to a working A-9; installing larger dehumidifiers;
or installing large capacity air conditioner; and using mops
after floor has been hosed down.

25X1 2. Detach C - The processing at [] is a great
25X1 improvement over that at []. Although the same type proces-
sing equipment and chemicals are used, the working and equipments
condition, attitude of personnel including the [] commander
25X1 are all noticeably better. This situation, plus lighter workload
(at present time) has resulted in a much better photographic product
coming from [].

3. Conclusion - There is no question the greatest
improvement we can make is in retention of photo quality. Photo
equipment-wise we are approaching the limits of resolution. The
problem now is to retain the information recorded by the cameras
on film. It is of interest to note most of the film was found to
be overexposed but underdeveloped. At [] this underdevelop-
ment is due to speeding up the processing in order to decrease the
25X1 graininess in the negative. The speed up is required to compensate
for the relatively high developer temperature. However, this
technique also leads to improper washing and drying which results
in streaking, staining and sticking of film with consequent tearing.

B. RECOMMENDATIONS

- 25X1 1. See Par. 3A-1.
25X1 2. See Dr. Scott's Field Trip Report (Encl.1)
3. USAF supply modified A-9 processors and dryers
to []
4. If [] process to proper gamma it is quite
possible we could cut down on camera f/stop []
[]
5. Responsible USAF personnel should be made cogni-
zant of our findings. In this connection, L/Col.
Kemp AFOIN who was preparing to visit [] and
25X1 [] was given a complete briefing in the PDO's
25X1 office, 9 Sept. 1958. This briefing covered our
findings at all [] and included needs of not
only processing but of photo interpreters.

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C. MISC. INFORMATION

1. Col. Beerli indicated USAF was stopping courier film shipments in Wiesbaden area in order to make prints of mission take. He also stated [] personnel wished to give reports and information to SAC units in Germany. He believed the operational directive for [] particularly Par.III, B-3, [] was not being accomplished. He also indicated [] was using our commo net yet he was getting no information or courtesy copy. Col. Beerli's concern, I'm sure, is with losing accountability or security of the take, prior to or while it is entering our system.

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D. TRACKER, HAND CONTROL AND DRIFT SIGHT

1. Detach B - From 20 August to date, the Trackers have operated successfully 10 out of 11 missions. [] P-E, completely overhauled the assigned Trackers. It was noted 6 instead of 5 Trackers were in place at this detachment. Cables for hand control driftsight were still giving trouble by jamming. Arrangements were made through P-E to supply degreased cables of proper length which would be more reliable. Fogging of Tracker and Driftsight bubbles has become an exception rather than a rule. This has been attributed to more efficient nitrogen purging and redesign of exterior retaining ring for Tracker and Driftsight bubbles.

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2. Detach C- From 20 August to date, the Trackers have operated successfully 1 out of 3 missions. Only 4 Trackers were assigned and of these 2 were operationally. Through Hdq. Operations, Det. B was requested to send their sixth Tracker back to P-E for M&O and then P-E would ship this Tracker to Detach. C. In addition, one Tracker from Detach. C was couriered back to ZI for M&O at P-E. While we were at Detach. C the prism trunion of one of the Trackers separated. The undersigned couriered the optical structure back to ZI for repair. All 3 of these Trackers are now ready and will be taken to [] 17 Sept. 1958 for shipment to Detach. C. Arrangements were also made to have Detach. B supply information to Detach. C regarding procedures to follow to reduce fogging of Tracker and Driftsight bubbles. Degreased cables will also be furnished this detachment.

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E. EVALUATION OF CONFIGURATION OPTICS

1. Detach B & C - Generally speaking, the optics of all configurations are good. The lens system in the A-2 and B configurations appears to be in excellent condition. The scan mirror of the B's, with two exceptions (one at Detach B (SN 9) and Detach C) were good. Dr. Scott gave them an SOP to clean

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these mirrors. The scan mirror of B#10 at Detach C appeared to me to need considerable cleaning up or possible replacement. Dr. Scott, however, did not seem too concerned with its condition. After considerable discussion between the two of us, Dr. Scott did state the scan mirror will probably need replacement in the near future. We were not too sure there was a spare scan mirror in the system; Dr. Scott will check on this. It is probable as processing improves, discrepancies of a minor nature (i.e., slight focus errors, vibration, etc.) will become evident.

F. CONFIGURATIONS, GENERAL

1. It is the undersigned's opinion that the major contributing factor to malfunctions is the lack of quality control at Hycon. This lack of quality control and Hycon's failure or reluctance to recognize this deficiency upon their part has been most detrimental to our photo program. Essentially, Hycon's troubles were and are caused by failure to thoroughly:

- a. Check components manufactured by their subcontractors;
- b. Inspect and test their own components or GF equipments;
- c. Set up SOP's to assure detailed records were available of all components passing through Hycon and that these histories are available to detachments receiving the equipments.

2. The above shortcomings are not recent developments but have extended throughout the Project and still exist. The latest examples received on our last trip were as follows:

- a. A-2 linkage arms and shutter actuating springs are still failing. These are GFE. More critical selection and magnafluxing would probably have cut down on number of failures.
- b. One of the detachment photo supervisors, while in the ZI in July, brought up this problem (lack of quality control) with [redacted] admitted Hycon was at fault and that the detachments would have to minutely inspect all shipments and if necessary, disassemble and rebuild the item.

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- c. One of Hycon's former shutter assemblers and inspectors, now a member of one of the detachment teams, stated shutters were inspected and then test run excessively and then shipped without further inspection. Cycle times and in many cases breakdowns during testing were not recorded. Although detachments submit full records upon forwarding components to M&O, record sheets returned with items from M&O are simply stamped "THIS ARTICLE HAS BEEN COMPLETELY SERVICED AND INSPECTED AT M&O." When the detachments became concerned with these generalities, Hycon sent them a message, [redacted] dated 7 June 1958, which in Par. 3 stated, "Assume 5,000 cycles on B shutters and 15,000 cycles on full components."
 - d. [redacted] (IN 46625), 11 September 1958, Par. 3, indicates the problem of laxity in inspection at Hycon is still with us.
 - e. It is my understanding other Hycon personnel who no longer are with the Company have also admitted laxity in their M&O procedures. The same ones, incidentally, who denied these accusations while in Hycon's employ.

3. The photo detachments are relying less on Hycon for guidance. They are keeping excellent and detailed records of all components and configurations. Examples are in PDO files. Certain minor discrepancies were found in preflight checkouts at both Detach. B and C but these were taken care of on our visit.

4. Recommendations

- a. I don't believe we can do much to tighten up Hycon's M&O procedures at this late stage of the Project. Suggestions given before were not accepted by Hycon. We can express our concern and hope Hycon will attempt to increase the efficiency of their M&O operations.
- b. We should rely more on the ability and talents of the Detachment Photo Sections and we should let them know we are placing greater faith in their abilities and talents. It was encouraging to note one photo section has a greater loyalty to the Project and the Detachment Commander than they do to Hycon. The other photo section is rapidly approaching this status.

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5. Spare Parts Status

- a. Both Detach B and Detach C have submitted to our depot and Hycon recommendations to increase quantities of spares in their FAK's. These additions are for both the "B" configurations and the Trackers. The basis of Det. B's request is in anticipation of greater use of the B and Tracker. Their detailed equipment histories indicate life cycles of components are lower than those established by Hycon. Detach C has added a safety factor of 20% to the factory life cycle estimates. This 20% reduction of life cycle time added only one additional component to the FAK. The undersigned feels the additional quantities of FAK items recommended by Detach B are more realistic than those of Detach C.
- b. The major shortages at the time of our visit were B shutters, some components of the A-2 and Tracker, and degreased hand control cables. This office immediately on return to Proj. Hqs. started work to accelerate the flow of these items to the Detachments. Some of these components are in process of shipment. We will continue to follow through on all other shortages.
- c. Maximum B Configuration Mission Rate
 - (1) Both Photo Supervisors agree the maximum B Configuration missions they could accomplish are as follows:
 - (a) Two (2) missions per day or
 - (b) Five (5) missions per week or
 - (c) Twenty (20) missions per month.
 - (2) There were certain qualifications to the above figures. Detach C, for example, stated this rate would not apply from any staging area. They did state with one exception they could accomplish this rate with no increase in FAK. Detach B, on the other hand, stated they would need an increase in FAK to undertake a maximum sustained operation.

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- (3) Both detachments were in agreement the above figures include missions that are planned but cancelled. For example, if a mission was laid on and then cancelled for some reason this would count as one of the above numbers, i.e. 1 of 2 missions/day or 1 of 5 per week or 1 of 20 per month. If another configuration mission was indicated, i.e., A-2 or A-1 this mission would be subtracted from the above B configuration missions numbers.
- (4) Both Photo Sections are in fairly close agreement as to time needed to preflight B configurations. This time is 8 to 10 hours per configuration. To post-flight it takes 2 men about 2 hours.

G. PERSONNEL

1. There has been a marked change in attitudes and ability of the majority of personnel in the Photo Sections since our last visit in March 1958. They seem to be more interested in doing a good job, namely keeping their equipment operating at top efficiency.

25X1 2. The re-up picture at Detachment B Photo Section is not too good. [] stated none of his people would sign a new contract if the unit stays in its present location; however, talks I had with individuals of the Section indicated at least 4 would stay on. There is no great problem at Detach. C. Almost all members are happy there and indicated they would sign another contract if they can stay in the same locality. Three of the present members of Det. C stated they would not sign another contract. Two of these are happy with their assignment but are having domestic problems. Unfortunately, both of these men are excellent technicians and will be hard to replace. The third man just can not adjust himself to an overseas field assignment.

25X1 3. Both Photo Supervisors objected to the 70 MM processing man drawing extra pay. I believe this extra pay is [] Their feeling, and rightly so, is each man in the Photo Section is cross trained and at least one other man can operate the processor. This man, when he works on the processor, does not receive the bonus. The Photo Supervisors and the undersigned recommend this additional pay for the processor be eliminated from any future contracts.

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4. It is of interest to note personnel in the Photo Section realize the R & R plays havoc with operational planning and they again stated as they did in March 1958, they did not expect or request to get this bonus in their last contract. Now, however, they would be extremely reluctant to give this feature up. The undersigned feels this attitude is not limited to Photo Section personnel alone.

H/ FILM & 70 MM PROCESSOR

1. The detachments are rotating their film stocks and seem to be returning empty spools and boxes without appreciable delays. I saw no empty spools or boxes at either detachment.

2. Both organizations are well supplied with 70 MM dupe material and spools. While at both detachments certain revisions to [] "Film Inventory" were discussed and when the undersigned returned to Proj. Hqs. they were OKed by [] Proj. Materiel.

3. The 70 MM processor at Detach. C is running well. That at Detach. B is still having troubles. Primarily, pump problems. Neither detachment expressed shortages in spare parts for the 70 MM processor.

4. Both Photo Sections expressed hope we would get them steel B boxes. Weight and cubage wise they are easier to stack and ship. In addition, the Photo Sections recommended one man fork lifts be assigned to them to facilitate handling of B film boxes. The film storage rooms are located in confined areas and consequently, conventional fork lifts cannot be used to bring in and stack the film boxes. All of this must now be done manually. There have been numerous occasions when boxes in process of stacking have slipped and personnel injuries have been narrowly averted.

Action: 100 steel B boxes have been ordered. PDO is getting information regarding size, weight capacity and price of one man fork lifts. One has been evaluated and rejected.

5. Recommendation:

- a. The 70 MM processor now at Detach. A be returned to EK for complete overhaul and then be used (1) as a standby for a staging operation; (2) as a replacement for Detach. B 70 MM processor. It is the undersigned's

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opinion if we keep the 70 MM processor at Detach. A much longer it will deteriorate to such an extent a major overhaul will be required before it can be used. At the present time we have no 70 MM processor backup in event one of our detachment processors should experience a major breakdown.

Action: To be taken by Dir. of OPS to state if removal of 70 MM processor from Detach. A to EK will hinder any future operation.

GENERAL CONCLUSIONS

a. The trip was most successful. Much information was obtained and exchanged.

b. As the Photo Sections drift further away from Hycon jurisdiction and technical guidance and the composition of the units become more heterogeneous we should step in and take a greater personal interest in the Photo Section's problems and needs. As a result of our constructive visits we have established excellent working relationship and our suggestions and ideas are welcomed. We should endeavor to hold their confidence and trust.



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ATTACHMENT:

Dr. R. Scott's Trip Report

Note: Mr. Reber has this report.

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